

## Alcohol & Injury

Excessive alcohol consumption is a leading risk factor for morbidity and mortality related to both intentional and unintentional injury in the United States.<sup>1</sup> Excessive alcohol use usually leads to impairment and puts drinkers, their families and communities at risk. Binge drinking can lead to motor vehicle crashes, injuries, violence against others, alcohol dependence, fetal alcohol spectrum disorders and sudden infant death syndrome, spread of HIV and other sexually transmitted infections and unplanned pregnancy. The American College of Surgeons Committee on Trauma reports excessive drinking is a significant risk factor for injury, and many injuries have alcohol and drug use as an important contributing factor.<sup>2</sup> It is estimated 30 to 50% of injured patients have a positive blood alcohol concentration (BAC) at the time of trauma center admission.<sup>3</sup> Drivers are considered alcohol-impaired when their BAC is .08 g/dL or higher.

### How does alcohol & injury affect the United States?

#### *Fatal data*

- From 2006–2010, there were 87,798 alcohol-attributable deaths due to excessive alcohol use on average each year for people all ages, and over half of these deaths were from injury (49,544).<sup>4</sup>
- During the same period, there were 4,358 alcohol-attributable deaths due to excessive alcohol use on average each year for those under 21; and 96% of those deaths were due to injury.<sup>4</sup>
- Male deaths accounted for 71% of all alcohol-attributable deaths for all ages due to excessive alcohol use on average each year.<sup>4</sup>
- In 2013, 10,076 people died in alcohol-impaired-driving crashes, which represents 31% of the total motor vehicle-related traffic fatalities.<sup>5</sup>
- In 2013, 21% of U.S. drivers involved in fatal crashes were alcohol-impaired or roughly 9,461 drivers.<sup>5</sup>

#### *Non-fatal data*

- Alcohol consumption is a major cause of hospitalized injury. It is estimated 27% of hospitalized injury victims are positive for alcohol, which includes nearly half of hospitalized pedestrian and near-drowning injury victims. Of hospitalized injuries, an estimated 21% are alcohol-attributable, including 36% of assaults.<sup>6</sup>
- In 2011, nearly 188,000 alcohol-related emergency department visits involved patients age 12 to 20 years.<sup>7</sup>

#### *Cost data*

- Excessive drinking cost \$249 billion in 2010, which equates to \$807 per person, or \$2.05 per drink. Seventy-two percent of the total cost is lost workplace productivity, 11% in healthcare expenses, 10% in criminal justice costs and 5% in motor vehicle crash costs.<sup>8</sup>
- Approximately \$2 of every \$5 of the economic costs of excessive alcohol use were paid by federal, state and local governments.<sup>8</sup>
- Costs vary throughout the states; however, the median cost per state is estimated at \$3.5 billion.<sup>8</sup>

### How does alcohol & injury affect Indiana?

- From 2006-2010, there were 1,646 deaths each year on average due to excessive alcohol use in Indiana. Sixty percent of these deaths were due to injuries, leading to an average of 35,321 years of potential life lost, which is a measure of premature mortality before age 65 years.<sup>4</sup>
- For those under 21, an average of 97% of deaths due to excessive alcohol use were injury-related.<sup>4</sup>
- In 2013, 198 people were killed in motor vehicle crashes involving alcohol-impaired-driving.<sup>5</sup>
- In 2010, excessive alcohol consumption cost an estimated \$4.5 billion, which equates to \$1.96 per drink.<sup>8</sup>
- In 2013, 25% of fatalities from alcohol-impaired-driving crashes involved a driver with a BAC .08 g/dL or higher, which is a decrease from 29% in 2012.<sup>5</sup>

## How do we address this problem?

### Policy:

- The Community Preventive Services Task Force recommends maintaining limits on hours and days of alcohol sale in on-premises settings, based on sufficient evidence of effectiveness for reducing excessive alcohol consumption and related harms.<sup>9</sup>
- The Community Preventive Services Task Force recommends **enhanced enforcement of laws prohibiting sale of alcohol to minors**, on the basis of sufficient evidence of effectiveness in limiting underage alcohol purchases.<sup>9</sup>
- The Community Preventive Services Task Force recommends laws that **establish a lower illegal BAC** for young or inexperienced drivers than for older or more experienced drivers based on sufficient evidence of their effectiveness in reducing alcohol-related motor vehicle crashes.<sup>10</sup>
- Originally passed in 2012 at the urging of college students, the **Indiana Lifeline Law** encourages young people to call 911 if someone suffers alcohol poisoning and makes the caller immune from criminal charges related to underage drinking. During the 2014 legislative session, Sen. Merritt authored Senate Enrolled Act 227, an update to the Lifeline Law that expands it to extend immunity from prosecution if underage callers seek help for other types of medical emergencies such as concussions or if they are a victim of a sexual assault, or witness and report a crime.

### Data collection:

- The **Indiana Trauma Registry** is a repository into which statewide trauma data has been brought together to support three foundational activities: identification of the trauma population, statewide process improvement activities and research. Information about traumatic injuries obtained while under the influence of drugs or alcohol is captured.
- The Indiana State Police maintain the **Automated Reporting Information Exchange System (ARIES)**, which captures vehicle crash data, including alcohol-related crashes. The data are used as the analytical foundation for traffic safety program planning and design.

### Interventions:

- The Division of Mental Health and Addiction (DMHA) Bureau of Mental Health Promotion and Addiction Prevention provides oversight and administration of the **Substance Abuse Prevention and Treatment (SAPT)** Block Grant to ensure funding that addresses statewide prevention and mental health promotion priorities. The Bureau of Mental Health Promotion and Addiction Prevention's mission is to reduce substance use and abuse and promote behavioral health across the lifespan of Indiana citizens by maintaining a coordinated, effective and accountable system of prevention and behavioral health promotion services.
- An **interlock device** is a breath-testing unit that a driver must blow into before starting a vehicle. The device disables the ignition if alcohol is detected. Effective January 1, 2015, ignition interlocks are mandatory under state law for repeat alcohol-impaired driving offenders. CDC's *Increasing Alcohol Ignition Interlock Use: Successful Practices for States*: [http://www.cdc.gov/motorvehiclesafety/pdf/impaired\\_driving/ignition-interlock\\_successful\\_practices\\_for\\_states-a.pdf](http://www.cdc.gov/motorvehiclesafety/pdf/impaired_driving/ignition-interlock_successful_practices_for_states-a.pdf).
- **Sobriety checkpoints** are drunk driving deterrence locations where law enforcement officers are stationed to check drivers for signs of intoxication and impairment. Sobriety checkpoints have been upheld as constitutional in Indiana.
- The Community Preventive Services Task Force recommends **electronic screening and brief intervention (e-SBI)** based on strong evidence of effectiveness in reducing self-reported excessive alcohol consumption and alcohol-related problems among intervention participants.<sup>9</sup> The American College of Surgeons Committee on Trauma requires all trauma centers to implement universal SBI for alcohol use for all injured patients.<sup>2</sup> Brief alcohol interventions conducted at trauma centers have been shown to reduce trauma recidivism by as much as half.<sup>11</sup>

- According to the **Dietary Guidelines for Americans**, moderate alcohol consumption is defined as having up to 2 drinks per day for men and up to 1 drink per day for women. This definition is referring to the amount consumed on any single day and is not intended as an average over several days.<sup>12</sup>
- The Dietary Guidelines state that it is not recommended that anyone begin drinking or increase their frequency of drinking on the basis of potential health benefits because moderate alcohol intake also is associated with increased risk of violence, drowning and injuries from falls and motor vehicle crashes.<sup>12</sup>
- The Attorney General’s Office collaborates with The Century Council on the **Indiana Safe Students Initiative** to offer material and resources to help fight the battle against underage drinking and drunk driving. Website: <http://www.in.gov/attorneygeneral/2607.htm>.

#### Education:

- The CDC Injury Center released Vital Signs packages related to alcohol and drinking:
  - Vital Signs Alcohol Poisoning Deaths: <http://www.cdc.gov/vitalsigns/pdf/2015-01-vitalsigns.pdf>
  - Vital Signs Alcohol Screening and Counseling: <http://www.cdc.gov/vitalsigns/pdf/2014-01-vitalsigns.pdf>
  - Vital Signs Binge Drinking (2013): <http://www.cdc.gov/vitalsigns/pdf/2013-01-vitalsigns.pdf>
  - Vital Signs Binge Drinking (2012): <http://www.cdc.gov/vitalsigns/pdf/2012-01-vitalsigns.pdf>
  - Vital Signs Binge Drinking (2010): <http://www.cdc.gov/vitalsigns/pdf/2010-10-vitalsigns.pdf>

#### Measures: Healthy People 2020:

Substance Abuse (SA)-15: Reduce the proportion of adults who drank excessively in the previous 30 days.

SA-17: Decrease the rate of alcohol-impaired driving (.08+ blood alcohol content [BAC]) fatalities.

SA-20: Reduce the number of deaths attributable to alcohol.

#### Additional resources:

- DMHA Bureau of Mental Health Promotion and Addiction Prevention: <http://www.in.gov/fssa/dmha/index.htm>
- ISDH Division of Trauma and Injury Prevention: <http://www.in.gov/isdh/19537.htm>
- Indiana State Police: <http://www.in.gov/isp/>
- CDC: Alcohol and Public Health: <http://www.cdc.gov/alcohol/index.htm>
- CDC *Screening and Brief Intervention (SBI) for Unhealthy Alcohol Use: A Step-by-Step Implementation Guide for Trauma Centers*: <http://www.cdc.gov/injuryresponse/alcohol-screening/resources.html>
- National Center for Injury Prevention and Control, CDC: [http://www.cdc.gov/Motorvehiclesafety/Impaired\\_Driving/index.html](http://www.cdc.gov/Motorvehiclesafety/Impaired_Driving/index.html)
- National Highway Traffic Safety Administration: <http://www.nhtsa.gov/Impaired>
- National Institute on Alcohol Abuse and Alcoholism (NIAAA): <http://www.niaaa.nih.gov/>
- The Guide to Community Preventive Services: <http://www.thecommunityguide.org/index.html>

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